



# Section B:1

## ***Waste Management***

### **PROJECT MANAGERS**

G.H. Sanders, RL  
(509) 376-6888

E.S. Aromi Jr., WMH  
(509) 372-1033

## SUMMARY

Waste Management consists of the Solid Waste Storage and Disposal, Project Baseline Summary (PBS) WM03, Work Breakdown Structure (WBS) 1.2.1; Solid Waste Treatment, PBS WM04, WBS 1.2.2; Liquid Effluents - 200 Area, PBS WM05, WBS 1.2.3.1; and the Waste Encapsulation and Storage Facility, PBS TP02, WBS 1.4.2.

PBS WM05 is divided between WBS 1.2.3.1, Liquid Effluents (200 LEF) and WBS 1.2.3.2, 310 TEDF/340 Facility (300 LEF). The 310 TEDF/340 Facility work scope is included in the River Corridor Project, whereas the Liquid Effluents (200 LEF) work scope remains in Waste Management. For the purpose of performance analysis, PBS WM05 is reported in its entirety in the Waste Management Project (WMP), which has the majority of the work scope and funding.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, DOE-RL) shows one of one (100 percent) milestones was completed early. In addition, Tri-Party Agreement milestone, M-91-12, "Initiate Thermal Treatment of Contact-Handled — Low Level Mixed Waste (CH-LLMW)," is in dispute between RL and Ecology.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of January 31, 2001. Other data is updated as noted.

## NOTABLE ACCOMPLISHMENTS

**Mixed Low Level Waste (MLLW) Treatment/Disposal** – During the first two weeks of February 2001, 58.3 cubic meters (m<sup>3</sup>) of MLLW debris and 6.6 m<sup>3</sup> of thermally treatable waste were shipped to ATG, Inc. for treatment. Four boxes of macro-encapsulated debris (totaling 32.6m<sup>3</sup> of waste) were also received at the Mixed Waste Trench (MWT) during this period. In support of treatment, ATG has fed approximately 3,000 lbs (~10 drums) of the granulated activated carbon (GAC) into its GASVIT<sup>®</sup> unit. ATG is drafting the waste profiles for the returned treatment residues from the system (glass and stabilized sludge/particulate).

**Waste Receiving and Processing Facility (WRAP)** – The original "horseshoe shaped" contamination control devices on the two transuranic (TRU) glovebox exit ports have been replaced with circular shaped devices. These new devices should aid in the phased approach WRAP is taking to reduce the radiological controls currently being implemented during a drum exit. The object of the phased approach is to eliminate the need to post all or part of the process area as an Airborne Radiation Area (ARA) during drum exits that could increase the throughput of the TRU glovebox by a factor of four. Fiscal Year to Date (FYTD) production through January 31, 2001 at WRAP totals 546 Nondestructive Examination (NDE) on Drums (620 through February 15, 2001), and 366 Nondestructive Assay (NDA) on Boxes (405 through February 15, 2001).

**Liquid Waste Processing** – The Environmental Protection Agency (EPA) Region 10 approved the Toxic Substances Control Act (TSCA) Risk Evaluation of the 242-A Evaporator Campaign 01-01. In their letter of February 15, 2001, EPA approved the application and outlined three conditions of the approval. All conditions were as expected and do not adversely impact the campaign schedule.

Approximately 12.7 million gallons of wastewater were processed through ETF from FYTD through January 31, 2001. From October 1, 2000 through February 19, 2001, 13.9 million gallons of wastewater were processed through the 200 Effluent Treatment Facility supporting the Environmental Restoration Contractor 200-UP-1 Groundwater.

**Support to Nuclear Material Stabilization (NMS) Project** – Routine shipments of pipe overpack drums continue. The Waste Management Project (WMP) received 68 drums containing Rocky Flats ash

from the Plutonium Finishing Plant (PFP) in the first two weeks of February, bringing the total number of pipe overpacks received to 135.

**Support to River Corridor Project** – WMP continued to support the River Corridor Project Tri-Party Agreement milestone of March 2001 with shipping and receipt of waste in 22-ton steel boxes from the 324 building. Transportation and packaging issues were resolved in January, and five shipments have been completed since January 1, 2001. Two remaining shipments are scheduled for completion by mid-March 2001.

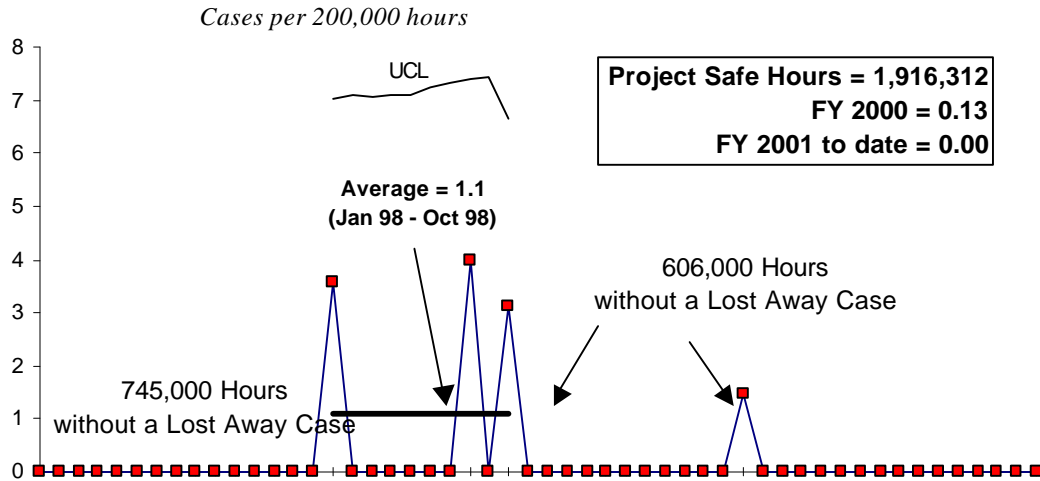
**Waste Management Strategic Plan** – The Plan was completed and approved by RL. Efforts are underway to place the document on the RL Waste Management web page.

**Facility Evaluation Board (FEB) Assessment** – FEB conducted an assessment of the WMP from January 15, 2001, through February 1, 2001. A draft of the assessment report was received, which included one noteworthy practice, eight WMP strengths, one core issue, and six areas requiring improvement. Comments on the technical accuracy of the report were provided and the final report is expected to be issued by March 1, 2001.

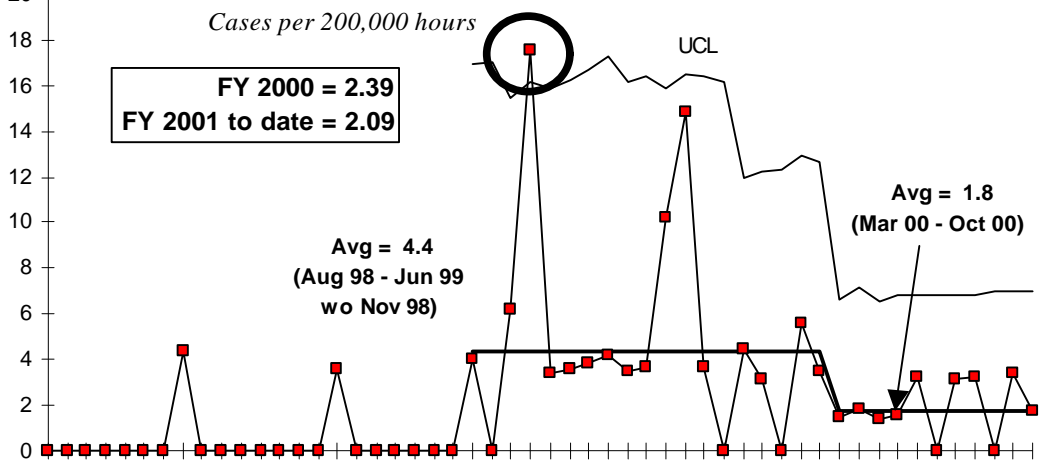
## **SAFETY**

WMP achieved 1.9 million hours without a lost away workday through January 2001. In January, there was one OSHA recordable case, no Restricted Workday Cases and one First Aid Case. The lost/restricted workday case rate and OSHA recordable case rate have shown significant decreases over the past year. The OSHA recordable case rate is stabilizing at approximately 1.8, and has been shifted to Yellow in order to declare that improvement is still needed. There has also been a significant decrease in First Aid Cases, with the past two months at two standard deviations below average.

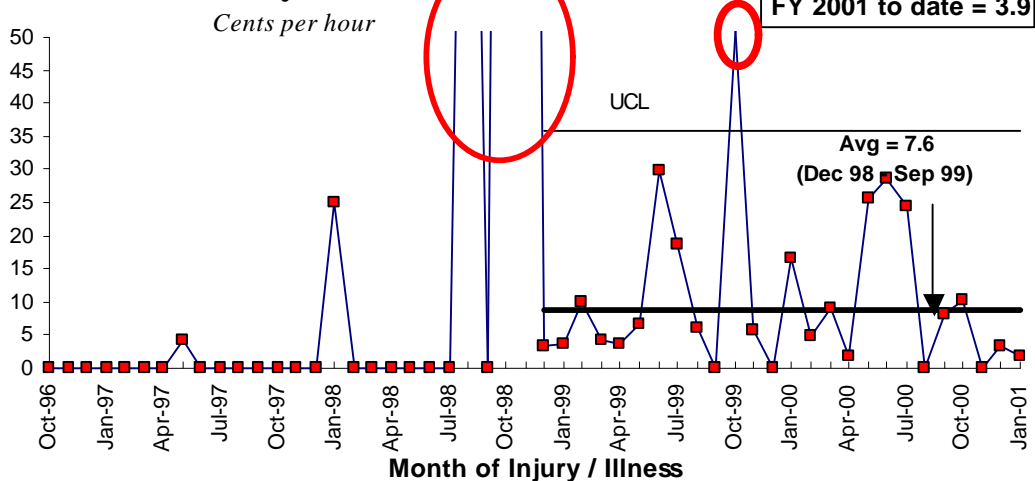
## Lost Away Workday Case Rate



## OSHA Recordable Case Rate



## DOE Safety Cost Index



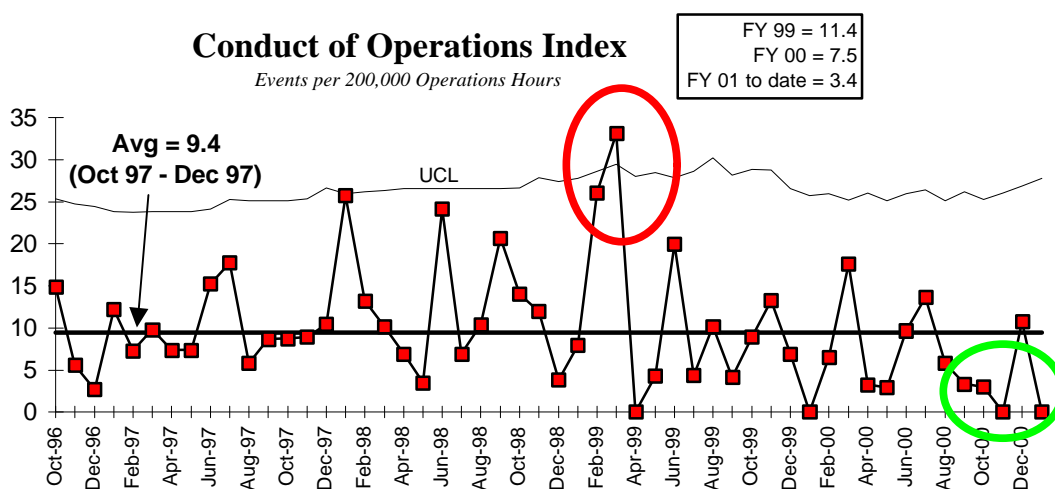
## ISMS STATUS

Green

Efforts continue to upgrade to Technical Authority/Technical Owner training.

- Support to the re-development of Hanford General Employee Training (HGET) and additional ISMS training is also continuing. Work has begun on combining all the separate procedures that govern the creation and maintenance of both administrative and technical procedures – providing the opportunity to reduce redundant processes, and to increase efficiency.

## CONDUCT OF OPERATIONS



Green

## BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

### Breakthroughs

Nothing to report at this time.

## Opportunities for Improvement

Green

**Mixed Waste Focus Area** — Waste Management continues to work with the Mixed Waste Focus Area (Robotics Product Line) on a technology development / demonstration activity at Hanford. The proposals for the Remote Sizing solicitation are targeted for February 22, 2001. Review meetings are scheduled for February 28, 2001, through March 2, 2001. Bids will be awarded in April with implementation as soon as May/June of 2001.

**WESF Basis for Interim Operations (BIO)** — The Waste Encapsulation Storage Facility (WESF) rapid loss of pool cell water accident and associated controls are being evaluated in depth and will be documented in a revision to the WESF BIO. A reduction in the minimum staffing requirement is expected from this analysis and BIO revision. An Engineering Change Notice (ECN) has been drafted for RL approval to change the required response time to a low water level condition from one hour to 48 hours.

## UPCOMING ACTIVITIES

**Liquid Waste Processing** — Evaporator Campaign 01-01 will be conducted in March. The Effluent Treatment Facility (ETF) has been shut down since February 11, 2001, to prepare for Evaporator Campaign 01-01. Groundwater processing will resume in April 2001.

**TRU Waste Shipment** — The next shipment remains scheduled for March 29, 2001. The TRUPACT-II trainer unit was delivered to Hanford on February 7, 2001, to allow training of the millwrights and crane operators for TRUPACT-II loading operations. A Waste Isolation Pilot Plant (WIPP) trainer will arrive at Hanford on February 26, 2001 to support the training efforts.

**Nuclear Material Stabilization Support** — Rocky Flats ash processing is scheduled for completion in early March with the balance of the 280 pipe overpack containers to be shipped to the CWC by the end of March. Processing and shipment of Hanford ash is scheduled to commence in early April.

**TRU Waste Retrieval** — Continue shipments between Trench 29 and the Central Waste Complex (CWC) of previously retrieved TRU drums. Authorization Basis (AB) preliminary hazard analysis sessions were conducted to identify the possible range of accidents and to identify the magnitude of events. The accidents appear to be similar in nature to accidents already evaluated for CWC and Low Level Burial Ground (LLBG) authorization basis documents. The AB criteria document was transmitted to RL for approval.

**Review of DOE Orders and Requirements** — Work is proceeding on the consolidation of procedures that control administrative procedures, as well as DOE Orders and Requirements. The ISMS coordinators are participating in a "Pilot Team" that is developing a process for DOE Directive Reduction and examples of the proper documentation for RL to use in making their decisions.

**Environmental Assessment (EA) for new LLBG Trenches** — An EA to support construction of four new trenches in the LLBG was issued for public comment. The new trenches are proposed to be constructed within the existing foot print of the LLBG, and are needed to support forecasted waste receipts and to support segregation of Category I and Category III low-level waste. Public comments will be addressed when received, following the 30-day comment period.

**TRU Recertification Audit** — The Hanford TRU recertification audit is scheduled for the week of June 11, 2001. Based upon the current schedule for readiness of the PFP activities, the PFP NDA and Value Engineering (VE) technique will be audited at the same time.

**Land Disposal Restriction (LDR) Report** — A change request was approved by the Washington State Department of Ecology (Ecology) on January 29, 2001, to allow a two-month extension of the LDR

report's due date. The new due date for transmittal of the report to the regulators, under Tri-Party Agreement milestone M-26-01, is now June 30, 2001. Upcoming activities include a consistency check and completeness review of the mixed waste data sheets that have recently been completed, as well as the draft "Potential Mixed Waste Table." [See also Regulatory Issue on page 14.]

**Accelerate Readiness to Receive Spent Nuclear Fuel K Basin Sludge** – By September 30, 2001, complete 1) clearing of 10 sections of the T Plant deck, 2) complete safety basis documentation and install long-lead procurements, 3) install handling, drying and loading equipment, and (4) initiate contractor readiness activities.

**DNFSB Recommendation 2000-2** - Complete the Phase 1 assessment required to implement DNFSB Recommendation 2000-2 at the Waste Encapsulation and Storage Facility (WESF) in late April 2001. This recommendation is to assess the reliable operation of vital safety systems (VSS) and is concerned with the degradation of VSS and capability to apply engineering expertise to maintain the configuration of these systems.




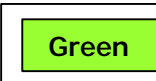
## MILESTONE ACHIEVEMENT

Green

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2001
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	1	0	0	0	0	2	0	3
DOE-HQ	0	0	0	0	0	0	0	0
FO	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	0	0	0
<b>Total Project</b>	1	0	0	0	0	2	0	3*

\* Tri-Party Agreement milestone, M-91-12, "Initiate Thermal Treatment of Contact-Handled — Low Level Mixed Waste (CH-LLMW)," is in dispute between RL and Ecology, and has been removed from the above chart.

Only TPA/EA milestones and all FY2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2002 TPA/EA milestones.

FY 2001 Tri-Party Agreement / EA Milestones		
Number	Milestone Title	Status
M-91-12 (A2G-01-104)	Initiate Thermal Treatment of CH-LLMW	Due 12/31/00 – Ecology has been notified that RL has invoked the Dispute Provision of the Tri-Party Agreement relative to completion of this milestone. WMP is supporting RL preparation of the dispute response. 
M-91-13 (A1C-01-001)	Initiate Disposal of CH-LLWM	Due 06/30/01 – Completed 9/15/1999 
M-91-18 (WMP-01-001)	Transmit T-Plant Sludge Storage Conceptual Design to Ecology	Due 06/29/01 – On Schedule 
M-26-05H (WMH-00-006)	Prep Biennial Tritium Treatment Technology Evaluation report	Due 08/31/01 – On Schedule 
DNFSB Commitments		
Nothing to report at this time.		

## MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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Overdue – 0

Forecast Late – 0

FY 2000 Overdue – 0

TPA-M-91-03 RL 1.4.2	Submit Hanford Site TRU/TRUM PMP Waste Management Project	06/30/00	06/30/00
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**Cause:** This milestone was completed with the submittal of the M-91-03 "Project Management Plan for Transuranic and Transuranic Mixed Waste PMP". Although the milestone is statused as complete, Ecology has since disapproved the document.

**Impact:** No overall impact is expected once agreement is reached on M-91-03 completion.

**Corrective Action:** The dispute over the adequacy of the PMP continues. Discussions with Ecology on a proposed path-forward for resolution of the dispute, via modifications to the Waste Management Strategic Plan, have been successful. Agreement on the scope of the required modifications has been reached, and a draft modification is being prepared. Ecology has agreed to an extension to April 23, 2001, for continuation of dispute, to allow sufficient time for preparation and approval of the Strategic Plan modification.



## FY 1999 Overdue – 1

TRP-98-709 RL Complete Hot Cell Deactivation 03/31/99 09/30/01  
1.4.2 WESF Facility (A-E)

**Cause:** This milestone is not complete due to not being supported at the current funding level.

**Impact:** No overall impact is expected.

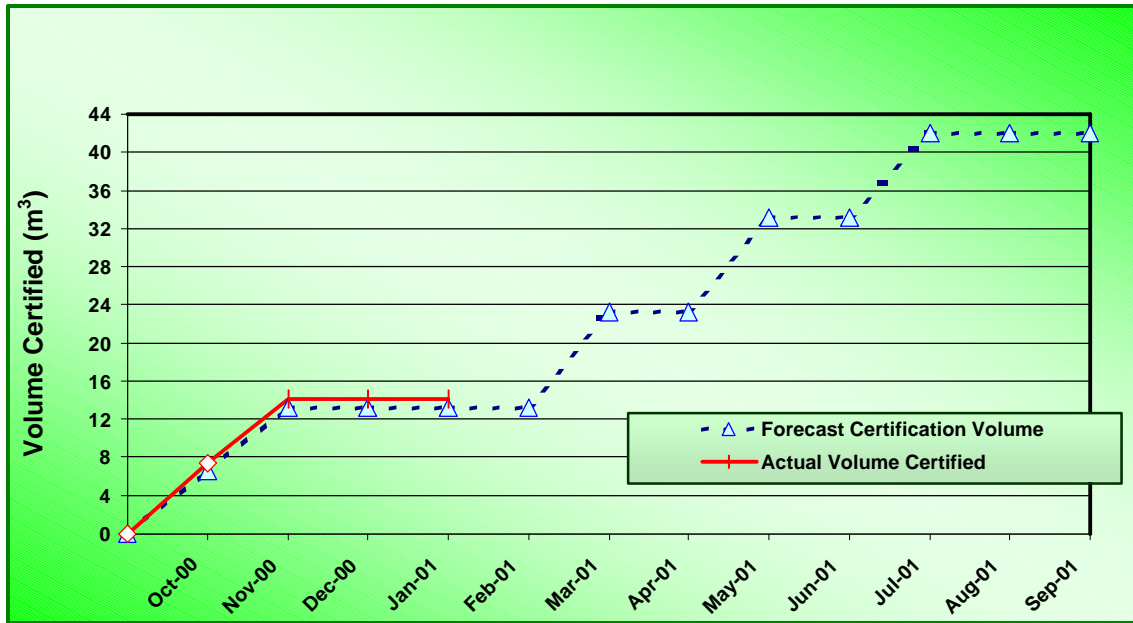
**Corrective Action:** Funding for this work scope [Return-on-Investment (ROI)] has been identified and a new forecasted completion date of September 30, 2001 established.

FY 2002 Tri-Party Agreement / EA Milestones		
Number	Milestone Title	Status
	Nothing to report at this time.	
DNFSB Commitments		
	Nothing to report at this time.	

## PERFORMANCE OBJECTIVES

### TRU Waste Certified

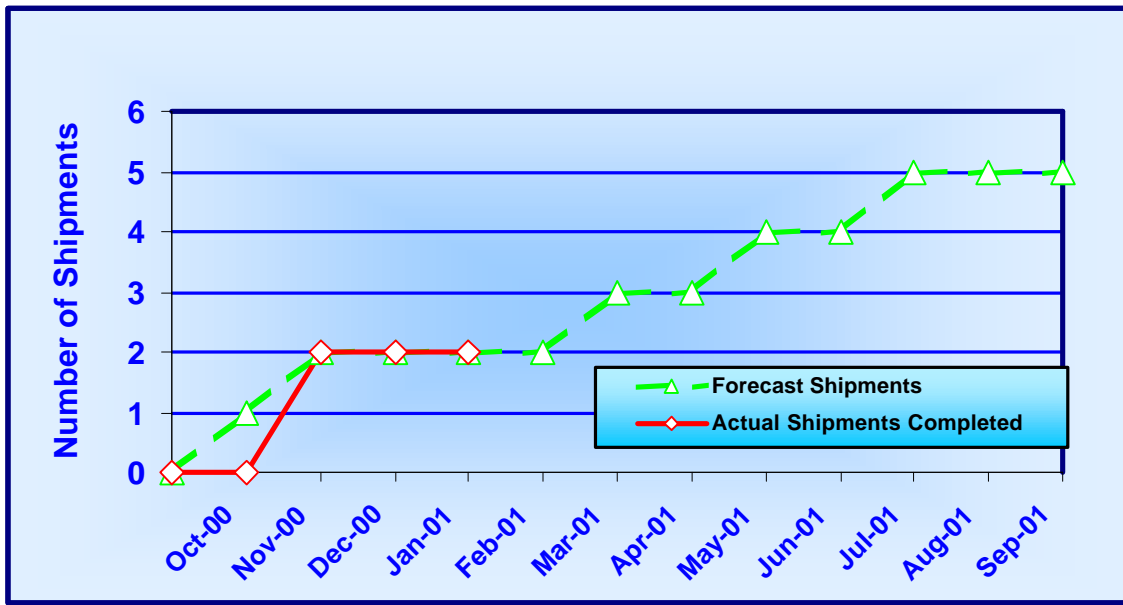
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Ahead of schedule. Through mid-February 2001, 35.2 m<sup>3</sup> of TRU waste certified.

### TRU Waste Shipped

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On schedule for the next shipment in March 2001.

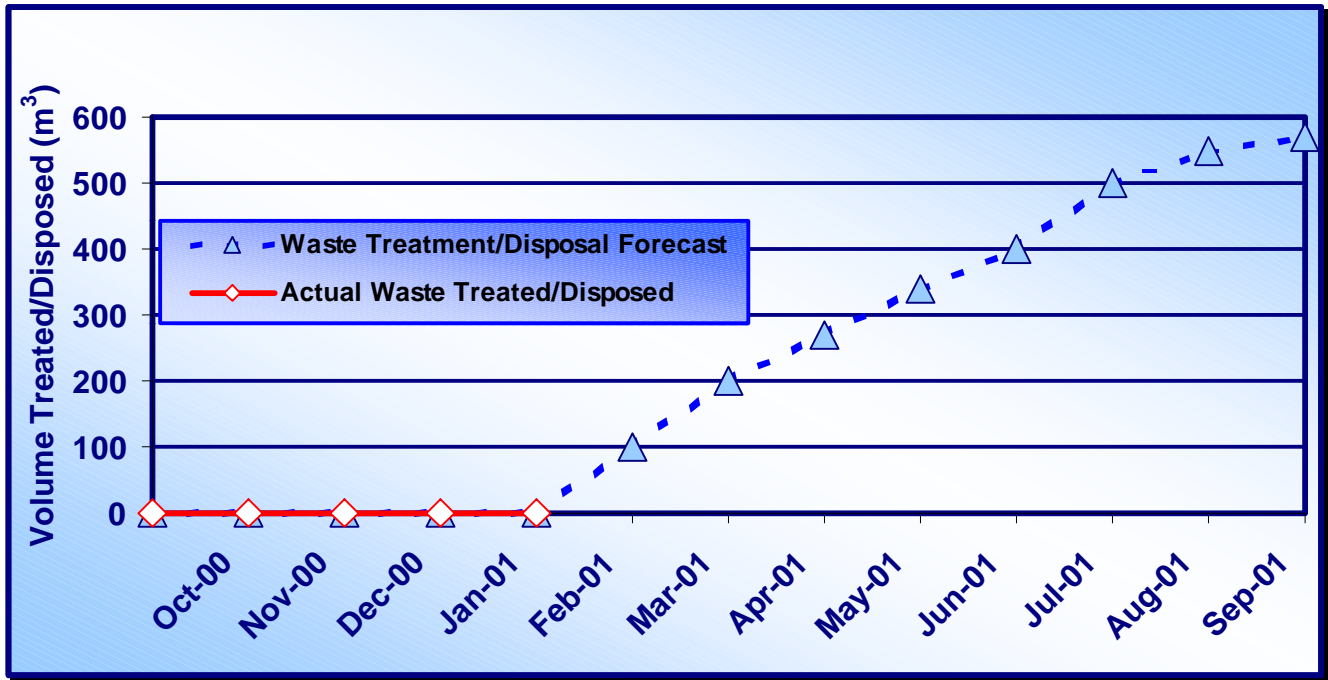
## Retrieve TRU Waste

Yellow

A Baseline Change Request (BCR) has been submitted identifying the funding source for the retrieval of the remaining uncovered drums, readiness activities for the covered drums, and the remainder of the AB documentation. An Advance Work Authorization (AWA) was approved in January to initiate this work. Funding for the Operational Readiness Review has not been identified at this time.

## Treat and Dispose Mixed Low Level Waste

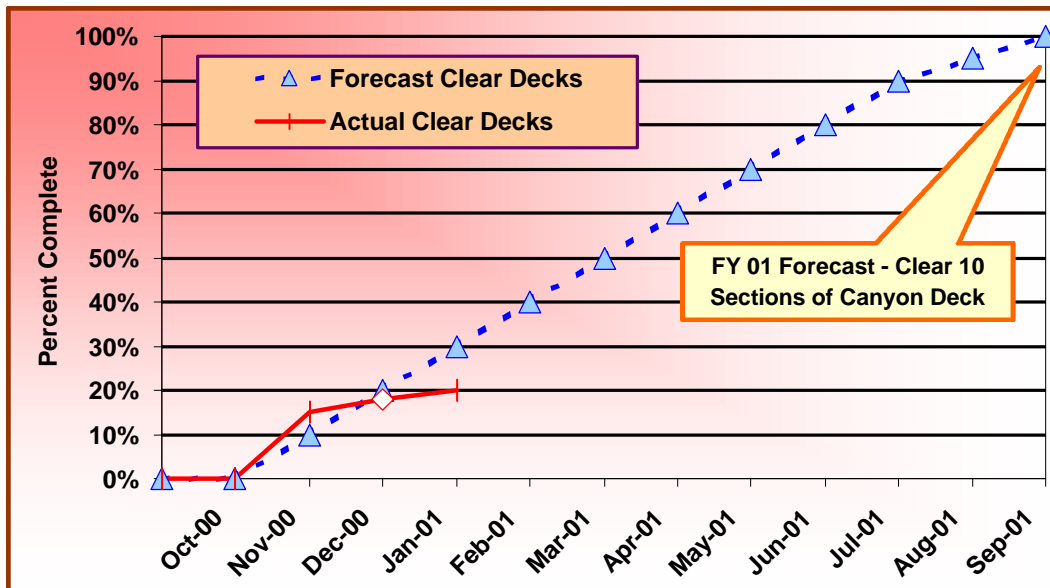
YELLOW



During the first two weeks of February 2001, 58.3m<sup>3</sup> of MLLW debris and 6.6m<sup>3</sup> of thermally treatable waste were shipped to ATG for treatment (333 m<sup>3</sup> and 41.5 m<sup>3</sup> FYTD, respectively). Four boxes of macro-encapsulated debris (totaling 32.6m<sup>3</sup> of treated waste) were also returned to WMP for disposal in the MWT during this period. To date, ATG has fed approximately 3,000 lbs (~10 drums) of the GAC into its GASVIT® unit.

## T Plant Deck Clearing

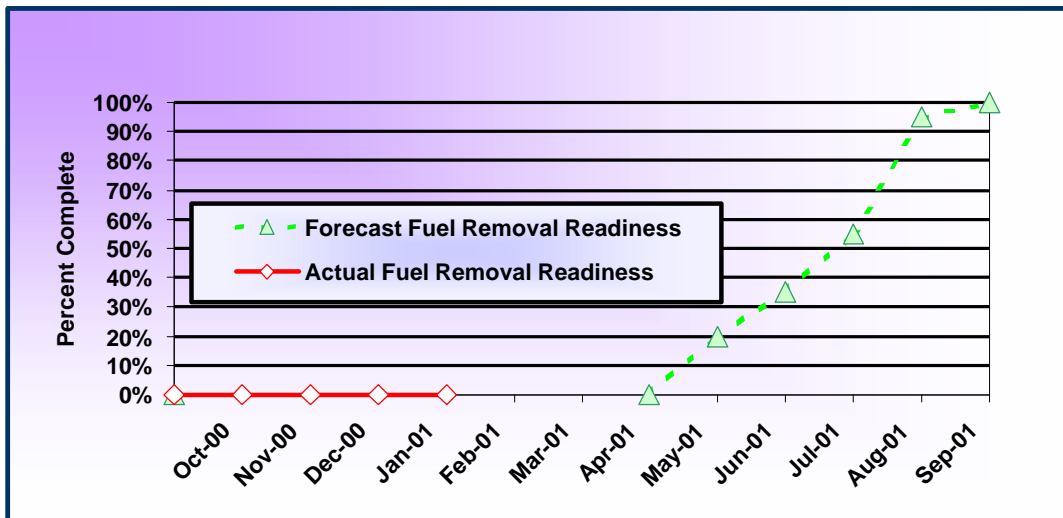
Yellow



Behind schedule due to lack of Radiation Control Technician's (RCT's), startup problems with plasma arc size reduction process, and additional crane maintenance required as a result of last year's inspection. The RCTs were on board as of January 25, 2001, but 60 days' additional training is required to establish full proficiency. The plasma arc process was placed back in operation on February 21, 2001. A second outage for crane maintenance is scheduled for mid-March. Recovery is expected by mid-April.

## Fuel Removal Readiness

YELLOW



Two weeks behind May 7, 2001 schedule for management self-assessment (preparatory to Contractor Readiness Assessment) due to safety assessment issue resolution and ISB revolution. Moving to strengthen Readiness approval with recent lessons learned from PFP and the Spent Nuclear Fuel Project (SNFP) and to fill previously identified critical positions. Recovery is expected by mid-May.

## FY 2001 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES CUMULATIVE TO DATE STATUS – (\$000)

Green

		FYTD									
	By PBS	BCWS	BCWP	ACWP	SV	%	CV	%	PEM*	EAC	
PBS WM03 WBS 1.2.1	Solid Waste Storage & Disposal	\$ 8,003	\$ 7,792	\$ 7,411	\$ (211)	-3%	\$ 381	5%	\$ 25,344	\$ 24,778	
PBS WM04 WBS 1.2.2	Solid Waste Treatment	\$ 11,117	\$ 11,484	\$ 10,966	\$ 367	3%	\$ 518	5%	\$ 38,810	\$ 38,818	
PBS WM05 WBS 1.2.3	Liquid Effluents - 200/300 Area	\$ 8,824	\$ 8,593	\$ 7,522	\$ (231)	-3%	\$ 1,071	12%	\$ 27,465	\$ 26,419	
PBS TP02 WBS 1.4.2	WESF	\$ 3,501	\$ 3,512	\$ 3,437	\$ 11	0%	\$ 75	2%	\$ 11,508	\$ 11,548	
Total		\$ 31,446	\$ 31,382	\$ 29,336	\$ (64)	0%	\$ 2,046	7%	\$ 103,126	\$ 101,563	

Authorized baseline as per the Integrated Planning Accountability, and Budget System (IPABS) – Project Execution Module (PEM).  
Note: Above data includes RL contract for Steam.

## FY TO DATE SCHEDULE / COST PERFORMANCE

There is no schedule variance. The favorable cost variance is primarily due to vacancies and staff on leave in the Liquid Effluents 200/300 Area.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

### Schedule Variance Analysis: (-\$0.1M)

#### Waste Management — 1.2.3-5/WM and 1.4.2 /TP02

**Description and Cause:** Schedule variance is within threshold.

### Cost Variance Analysis: (\$2.0M)

#### Liquid Effluents — 1.2.3/WM05

**Description and Cause:** The favorable cost variance is primarily due to vacancies and staff on leave.

**Impact:** None.

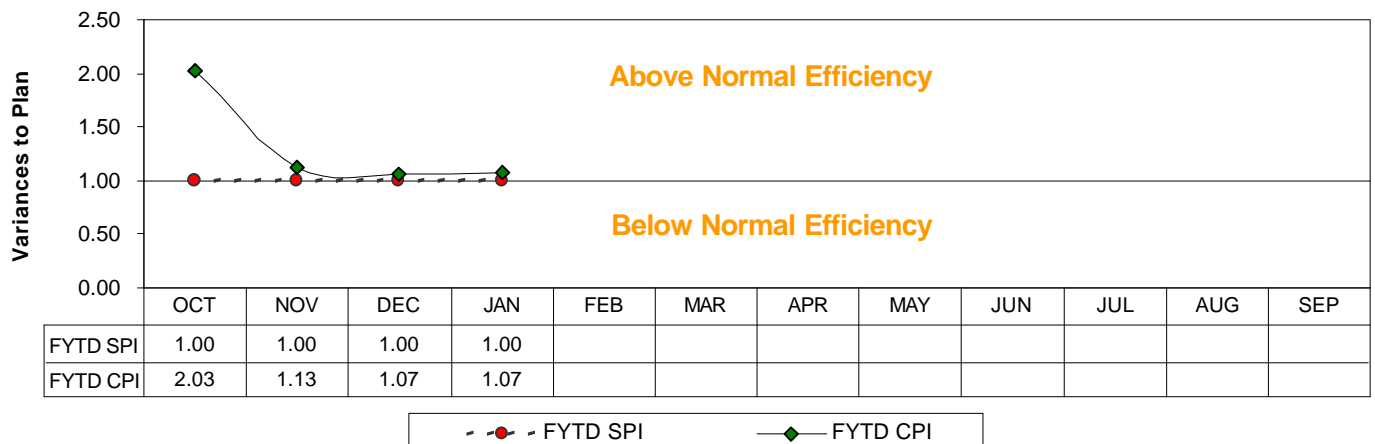
**Corrective Action:** The underruns will be used to partially fund TRU retrieval.

#### Liquid Effluents — 1.2.3.1/ WM05

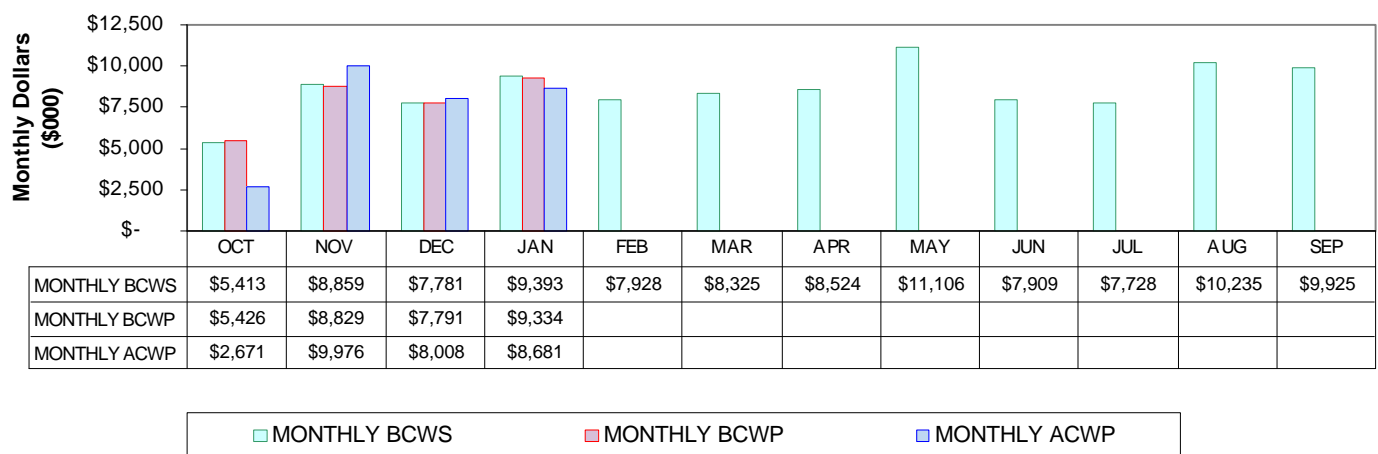
## COST/SCHEDULE PERFORMANCE (MONTHLY AND FYTD)

Green

### Fiscal Year to Date Performance Indices



### Monthly Performance Analysis



## FUNDS MANAGEMENT — FY 2001 TO DATE

### FUNDS VS SPENDING FORECAST (\$000)

Green

	Project Completion *			Post 2006 *			Line Items *		
	Funds	FYSF	Variance	Funds	FYSF	Variance	Funds	FYSF	Variance
<b>The Plateau</b>									
1.2 <b>Waste Management</b>									
TP02,WM03-05				97,294	96,939	355			
<b>Line Item</b>						0			
<b>Total Waste Mgt. Operating</b>				<b>\$ 97,294</b>	<b>\$ 96,939</b>	<b>\$ 355</b>			
<b>Total Waste Mgt. Line Item</b>									

FYSF includes RL contract for steam

\* Control Point

Above chart reflects FH Project structure which divides certain PBS's between projects (e.g., WM05 – Waste Management and the River Corridor project). Consequently, these figures will differ from those shown elsewhere in this report (as generated in the PEM system).

## ISSUES

### Regulatory Issues

**Report for Hanford Land Disposal Restrictions (LDR) for Mixed Wastes** — The 2001 LDR report is due to the regulators by June 30, 2001, in accordance with Tri-Party Agreement milestone M-26-01, "Annual Hanford Land Disposal Restrictions Report." Efforts are continuing to complete the "Potential Mixed Waste Table," which is, as a result of the LDR settlement with Ecology, a required part of the LDR report. This table lists materials that are not yet waste, but could be expected to become (mixed) waste in the future, and provides enforceable dates for filling data gaps on the materials as well as starting negotiations with the regulators on a path-forward towards treatment and/or disposal. The issue is in providing these dates.

**Impacts:** Contractors cannot reasonably commit themselves to enforceable dates that are not a part of their contracts and potentially not funded.

**Corrective Action:** Meetings are being held to determine an acceptable solution. DOE involvement will be required.

**Dispute Re: Tri-Party Agreement Milestone M-91-12 "Initiate thermal treatment. At Least 600m<sup>3</sup> provided for Treatment by December 2005"** — Ecology and RL are in disagreement as to the completion of this milestone. Ecology has been notified that RL has consequently invoked the Dispute Provision of the Tri-Party Agreement.

**Impacts:** There is no impact to work. Determination of the completion of the milestone is the only delay.

**Corrective Actions:** WMP is supporting RL preparation of the dispute response.

**TPA Milestone M-91-03 "Submit Hanford Site TRU/TRUM Waste Project Management Plan (PMP) to Ecology"** — Ecology has not approved completion of M-91-03. The adequacy of the M-91-03 "Project Management Plan for Transuranic and Transuranic Mixed Waste" is in dispute.

**Impacts:** There is no impact to work.

**Corrective Actions:** Discussions with Ecology on a proposed path forward for resolution of the dispute, via modifications to the Waste Management Strategic Plan, have been successful. Agreement on the scope of the required modifications has been reached, and a draft modification is being prepared. Ecology has agreed to an extension to April 23, 2001 for continuation of dispute, to allow sufficient time for preparation and approval of the Strategic Plan modification.

**Burial Ground Draft Part A** — Cases of improper disposal of mixed waste in the LLBG have occurred after the effective date of RCRA on the Hanford Site (August 19, 1987). Ecology believes other cases of improper disposal of mixed waste have also occurred, and Notices of Deficiency were issued.

**Impacts:** There is no impact to work.

**Corrective Actions:** Negotiations have been ongoing with Ecology on the approach for dealing with these issues. Notice of Deficiency (NOD) responses are currently being prepared.

## Technical/External / DOE Issues and DOE Requests

**Issue:** Nothing to report.

**Impacts:** None at this time.

**Corrective Action:** None at this time.

## BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS (\$000)

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY01 COST IMPACT \$000	S C H	T E C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
WM-2001-013	1/17/01	TRU Retrieval	\$0	X		2/20/01			At CCB
ADVANCE WORK AUTHORIZATIONS									
WM-AWA-004	1/17/01	TRU Retrieval		X		1/17/01	2/7/01	N/A	

## KEY INTEGRATION ACTIVITIES

- Preparing T Plant to receive Spent Nuclear Fuel K Basin sludge
- Continue support of UP-1 Groundwater treatment. Complete the upcoming 242A Evaporator campaign 01-01 to support the Office of River Protection
- Continue support to River Corridor Project for removal of waste from 324 and 327 buildings
- Continue to work with Pacific Northwest National Laboratory, EM 50, National Energy Technology Laboratory, and the Mixed Waste Focus Area to implement the size-reduction technology demonstration/deployment at T Plant
- Continue support to Nuclear Materials Stabilization for removal of waste from the PFP
- The Solid Waste Integrated Forecast is updated twice a year. Data recently collected from both on-site and off-site generators is being reviewed and cleared for the FY 2001.1 forecast update. The data is used to project waste shipments, waste receipt, and waste treatment and disposal needs.